**Maryland Historical Trust**

Maryland Inventory of Historic Properties number: PG:65-23

Name: MD 320 (PINEY BRANCH RD) OVER NORTHWEST BR

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

**MARYLAND HISTORICAL TRUST**

Eligibility Recommended _____ Eligibility Not Recommended __X____

Criteria: ____A ____B ____C ____D Considerations: ___A ___B ___C ___D ___E ___F ___G __None

Comments: _____

_____

_____

Reviewer, OPS: _Anne E. Bruder_____ Date: __3 April 2001____

Reviewer, NR Program: __Peter E. Kurtze_____ Date: __3 April 2001____

**MARYLAND INVENTORY OF HISTORIC BRIDGES** **MHT No.** PG: 65-23
**HISTORIC BRIDGE INVENTORY**
**MARYLAND STATE HIGHWAY ADMINISTRATION/**
**MARYLAND HISTORICAL TRUST**

**SHA Bridge No.** 16065 **Bridge name** MD 320 (Piney Branch Road) over Northwest Branch

**LOCATION:**
**Street/Road name and number [facility carried]** MD 320 (Piney Branch Road)

**City/town** Takoma Park **Vicinity** X

**County** Prince George's

**This bridge projects over: Road**____ **Railway**_____ **Water** X **Land** ____

**Ownership: State** X **County** _____ **Municipal** _____ **Other** _____

**HISTORIC STATUS:**
**Is the bridge located within a designated historic district? Yes** _____ **No** _____
**National Register-listed district** ____ **National Register-determined-eligible district** __
**Locally-designated district** _____ **Other** _____

**Name of district** _____

**BRIDGE TYPE:**
**Timber Bridge** _____:
**Beam Bridge** _____ **Truss -Covered** ___ **Trestle** ____ **Timber-And-Concrete** ___

**Stone Arch Bridge** _____

**Metal Truss Bridge** _____

**Movable Bridge** _____:
**Swing** _____ **Bascule Single Leaf** __ **Bascule Multiple Leaf** _____
**Vertical Lift** _____ **Retractile**_____ **Pontoon** _____

**Metal Girder**_____:
**Rolled Girder** _____ **Rolled Girder Concrete Encased** _____
**Plate Girder** _____ **Plate Girder Concrete Encased** _____

**Metal Suspension** _____

**Metal Arch** _____

**Metal Cantilever** _____

**Concrete** X:
**Concrete Arch** X **Concrete Slab**_____ **Concrete Beam** ____ **Rigid Frame** _____

**Other** _____ **Type Name** _____

PG: 65-23

**DESCRIPTION:**
**Setting: Urban** ____X____ **Small town** _____ **Rural** _____

**Describe Setting:**

Bridge 16065 carries MD 320 over Northwest Branch in Prince George's County. MD 320 runs east-west and Northwest Branch flows southeast. The bridge is located in the vicinity of Takoma Park in Northwest Branch Park, and is surrounded by a wooded area.

**Describe Superstructure and Substructure:**

Bridge 16065 is a 1-span, 4-lane, concrete arch bridge. The bridge was originally built in 1910, and was widened with steel beams, a concrete deck, and a new railing in 1955. The structure is 18.3 meters (60 feet) long and has a clear roadway width of 17.7 meters (58 feet); there are 2 sidewalks each measuring 1.5 meters (5 feet) wide. The out-to-out width is 21.3 meters (70 feet). The superstructure consists of 1 arch which supports a cast-in-place concrete deck and concrete parapets with metal rails. The arch spans 17.1 meters (56 feet) and is a filled spandrel concrete arch. The concrete deck has a bituminous wearing surface. The structure has concrete parapets with metal railings and the roadway approaches have metal guardrails. The substructure consists of 2 concrete abutments. There are 4 flared concrete wingwalls. The bridge is not posted, and has a sufficiency rating of 93.6.

According to the 1996 inspection report, this structure was in satisfactory condition with patching and general light deterioration. The asphalt wearing surface is patched and spalling. The arch has areas with exposed reinforcement bars. The spandrel walls are spalling and have efflorescence. The metal beams are lightly rusting. The abutments and wingwalls have cracks and efflorescence. Also, the concrete parapet has collision damage, and part of the metal rail is bent and rusting.

**Discuss Major Alterations:**

The bridge was widened in 1955 with a metal beam section. At the time of the widening, the parapets were replaced with a metal railing. The bridge has been patched numerous times, and most of the patches are failing.

**HISTORY:**

**WHEN was the bridge built:** 1910, 1955
**This date is: Actual** _____X_____ **Estimated** _____
**Source of date: Plaque** _____ **Design plans** ____ **County bridge files/inspection form** ____
**Other (specify):** State Highway Administration Inspection Report/Bridge File

**WHY was the bridge built?**

The bridge was constructed in response to the need for more efficient transportation network and increased load capacity.

**WHO was the designer?**

Unknown

**WHO was the builder?**

Unknown

**WHY was the bridge altered?**

The bridge was widened to accommodate more traffic and to meet the roadway approaches of the widened road.

**Was this bridge built as part of an organized bridge-building campaign?**

Unknown

**SURVEYOR/HISTORIAN ANALYSIS:**

**This bridge may have National Register significance for its association with:**
**A - Events _____ B- Person _____**
**C- Engineering/architectural character _____**

The bridge does not have National Register significance due to its widening with a metal beam section.

**Was the bridge constructed in response to significant events in Maryland or local history?**

The advent of modern concrete technology fostered a renaissance of arch bridge construction in the United States. Reinforced concrete allowed the arch bridge to be constructed with much more ease than ever before and maintained the load-bearing capabilities of the form. As the structural advantages of reinforced concrete became apparent, the heavy, filled barrel of the arch was lightened into ribs. Spandrel walls were opened, to give a lighter appearance and to decrease dead load. This enabled the concrete arch to become flatter and multi-centered, with longer spans possible. Designers were no longer limited to the semicircular or segmental arch form of the stone arch bridge. The versatility of reinforced concrete permitted development of a variety of economical bridges for use on roads crossing small streams and rivers.

Maryland's roads and bridge improvement programs mirrored economic cycles. The first road improvement of the State Roads Commission was a 7 year program, starting with the Commission's establishment in 1908 and ending in 1915. Due to World War I, the period from 1916-1920 was one of relative inactivity; only roads of first priority were built. Truck traffic resulting from war related factories and military installations generated new, heavy traffic unanticipated by the builders of the early road system. From 1920-1929, numerous highway improvements occurred in response to the increase in Maryland motor vehicles from 103,000 in 1920 to 320,000 in 1929, with emphasis on the secondary system of feeder roads which moved traffic from the primary roads built before World War I. After World War I, Maryland's bridge system also was appraised as too narrow and structurally inadequate for the increasing traffic , with plans for an expanded bridge program to be handled by the Bridge Division, set up in 1920. In 1920 under Chapter 508 of the Acts of 1920 the State issued a bond of $3,000,000.00 for road construction; the primary purpose of these monies was to meet the state obligations involving the construction of rural post roads. The secondary purpose of these monies was to fund (with an equal sum from the counties) the building of lateral roads. The number of hard surfaced roads on the state system grew from 2000 in 1920 to 3200 in 1930.

By 1930, Maryland's primary system had been inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930's.

As the nation's automotive traffic increased in the early twentieth century, local road networks were consolidated, and state highway departments were formed to supervise the construction and improvement of state roads. With a diverse topographical domain encompassing numerous small and large crossings, Maryland engineers quickly recognized the need for expedient design and construction through the standardization of bridge designs.

The concept and practice of standardization was one of the most important developments in engineering of the twentieth century. In Maryland, as in the rest of the nation, the standardized concrete types became the predominant bridge types built. In the period 1911 to 1920 (the decade in which standardized plans were introduced), beams and slabs constituted 65 percent and arches 35 percent of the extant 29 bridges built in Maryland during this period. In the following decade, 1921-1930, the beam (now the T-beam) and slab increased to 73 percent and the arch had declined to 27 percent of the 129 extant bridges; in the next decade (1931-1940), the beam and slab achieved 82 percent and arches had further declined, constituting only 18 percent of the total of extant bridges built on state-owned roads between 1931 and 1946.

Although beam and slab bridges became the utilitarian choice, it appears that the arch was selected when aesthetic as well as other site conditions were considered. The architectural treatment of extant arch bridges supports this assessment. Many of these bridges were multiple span structures with open spandrels or masonry facing. Another decorative feature of the concrete arch bridge was an open, balustrade-style parapet. Despite the popularity of ornamental arches and the increase in use of beam and slab bridges, examples of simpler, single and multiple span closed concrete arch bridges with solid parapets continued to be constructed throughout the early twentieth century.

**When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?**

There is no evidence that the construction of this bridge had a significant impact on the growth and development of this area.

**Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?**

Unknown

**Is the bridge a significant example of its type?**

A significant example of a concrete arch bridge should possess character-defining elements of its type, and be readily recognizable as an historic structure from the perspective of the traveler. The integrity of distinctive features visible from the roadway approach, including parapet walls or railings, is important in structures which are common examples of their type. In addition, the structure must be in excellent condition. This bridge, which was widened with a metal beam section, is an undistinguished example of a concrete arch bridge.

PG: 65-23

**Does the bridge retain integrity of important elements described in Context Addendum?**

This bridge was widened in 1955, resulting the loss of such character-defining elements as the parapets and the arch section.

**Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?**

This bridge is not a significant example of the work of a manufacturer, designer, and/or engineer.

**Should the bridge be given further study before an evaluation of its significance is made?**

No further study of this bridge is required to evaluate its significance.

**BIBLIOGRAPHY:**

**County inspection/bridge files** _____ **SHA inspection/bridge files** X
**Other (list):** _____

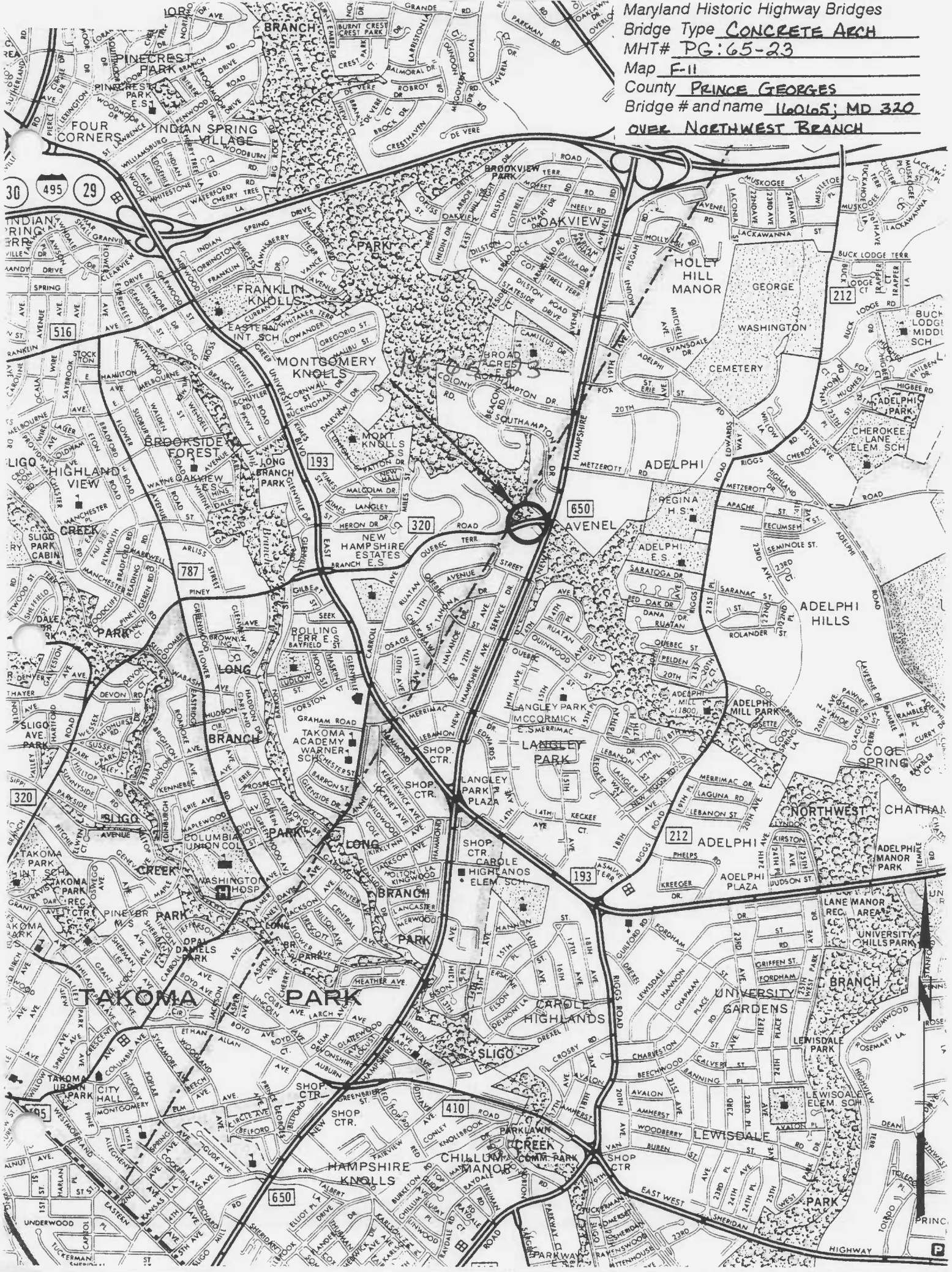
Johnson, Arthur Newhall
1899 The Present Condition of Maryland Highways. In *Report on the Highways of Maryland.* Maryland Geological Survey, The Johns Hopkins University Press, Baltimore.

P.A.C. Spero & Company and Louis Berger & Associates
1995 Historic Highway Bridges in Maryland: 1631-1960: Historic Context Report. Maryland State Highway Administration, Maryland State Department of Transportation, Baltimore, Maryland.

Tyrrell, H. Grattan
1909 *Concrete Bridges and Culverts for Both Railroads and Highways.* The Myron C. Clark Publishing Company, Chicago and New York.

**SURVEYOR:**

**Date bridge recorded** December 1997
**Name of surveyor** Wallace, Montgomery & Associates / P.A.C. Spero & Company
**Organization/Address** P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204
**Phone number** (410) 296-1635 **FAX number** (410) 296-1670


Maryland Historic Highway Bridges
Bridge Type CONCRETE ARCH
MHT# PG:65-23
Map F-11
County PRINCE GEORGES
Bridge # and name 160165; MD 320
OVER NORTHWEST BRANCH
PG:65-23
BRANCH
PINECREST PARK
FOUR CORNERS
INDIAN SPRING VILLAGE
FRANKLIN KNOLLS
MONTGOMERY KNOLLS
BROOKSIDE FOREST
HIGHLAND VIEW
SLIGO CREEK
SLIGO PARK CABIN
NEW HAMPSHIRE ESTATES E.S.
ROLLING TERR E.S.
TAKOMA ACADEMY
WARNER SCH
LONG BRANCH
SLIGO
TAKOMA PARK
TAKOMA PARK INT SCH
WASHINGTON HOSP.
PINEY BR PARK
OPAL DANIELS PARK
CITY HALL
TAKOMA URBAN PARK
HAMPSHIRE KNOLLS
CHILLUM MANOR
PARKLAWN CREEK COMM. PARK
OAKVIEW
BROOKVIEW PARK
BROAD ACRES E.S.
MONT KNOLLS E.S.
OAKVIEW E.S.
HOLEY HILL MANOR
GEORGE WASHINGTON CEMETERY
ADELPHI
REGINA H.S.
ADELPHI E.S.
ADELPHI HILLS
ADELPHI MILL (1800)
ADELPHI MILL PARK
LANGLEY PARK
LANGLEY PARK MCCORMICK E.S.
LANGLEY PARK PLAZA
SHOP. CTR.
CAROLE HIGHLANDS
CAROLE HIGHLANDS ELEM. SCH
ADELPHI PLAZA
NORTHWEST CHATHAM
ADELPHI MANOR PARK
COOL SPRING
CHEROKEE LANE ELEM. SCH
ADELPHI PARK
BUCK LODGE MIDDL SCH
LANE MANOR REC. AREA
UNIVERSITY HILLS PARK
UNIVERSITY GARDENS
LEWISDALE PARK
LEWISDALE ELEM. SCH
LEWISDALE
EAST WEST PARK
495
30
29
516
193
320
787
650
AVENEL
212
410

1. PG:65-23
2. MD 320 over Northwest Branch
3. Prince George's Co., MD
4. Wallace, Montgomery & Assoc.
5. 12/97
6. MD SHPO
7. Elevation looking upstream
8. 1 of 4

1. PG:65-23
2. MD 320 over Northwest Branch
3. Prince George's Co., MD
4. Wallace, Montgomery & Assoc.
5. 12/97
6. MD SHPO
7. Elevation looking downstream
8. 2 of 4

1. PG:65-23
2. MD 320 over Northwest Branch
3. Prince George's Co., MD
4. Wallace, Montgomery & Assoc.
5. 12/97
6. MD SHPO
7. Looking East
8. 3 of 4

1. PG:65-23
2. MD 320 over Northwest Branch
3. Prince George's Co., MD
4. Wallace, Montgomery & Assoc.
5. 12/97
6. MD SHPO
7. Looking West
8. 4 of 4